08-30-04

PTO/SB/64 (07-06)
Approved for use through 09/30/2006. OMB 0651-0031
U.S. Patent and Trademark Office; U.S. DEPARTMENT OF COMMERCE

PETITION FOR REVIVAL OF AN APPLICATION FOR PATENT ABANDONED UNINTENTIONALLY UNDER 37 CFR 1.137(b)

Docket Number (Optional)
UCF-372

First named inventor: Wing-Kit Choi

Application No.: 10/643,063

Art Unit: 08/18/2003

Filed: 08/18/2003

Examiner: Dung T. Nguyen

Title: HIGH SPEED AND WIDE VIEWING ANGLE LIQUID CRYSTAL DISPLAYS

08/31/2006 EFLORES 00000002 10643063
01 FC:1453 1500.00 OP

Attention: Office of Petitions
Mail Stop Petition
Commissioner for Patents
P.O. Box 1450
Alexandria, VA 22313-1450
FAX (571) 273-8300

NOTE: If information or assistance is needed in completing this form, please contact Petitions Information at (571) 272-3282.

The above-identified application became abandoned for failure to file a timely and proper reply to a notice or action by the United States Patent and Trademark Office. The date of abandonment is the day after the expiration date of the period set for reply in the office notice or action plus an extensions of time actually obtained.

APPLICANT HEREBY PETITIONS FOR REVIVAL OF THIS APPLICATION

NOTE: A grantable petition requires the following items:
(1) Petition fee;
(2) Reply and/or issue fee;
(3) Terminal disclaimer with disclaimer fee - required for all utility and plant applications filed before June 8, 1995; and for all design applications; and
(4) Statement that the entire delay was unintentional.

1.Petition fee

☐ Small entity-fee $ _____ (37 CFR 1.17(m)). Applicant claims small entity status. See 37 CFR 1.27.

☑ Other than small entity – fee $ 1,500.00 (37 CFR 1.17(m))

2. Reply and/or fee

A. The reply and/or fee to the above-noted Office action in the form of Amendment (identify type of reply):

☑ has been filed previously on January 26,2006.
☑ is enclosed herewith.

B. The issue fee and publication fee (if applicable) of $ _____.
☐ has been paid previously on _____.
☐ is enclosed herewith.

3. Terminal disclaimer with disclaimer fee

☐ Since this utility/plant application was filed on or after June 8, 1995, no terminal disclaimer is required.

☐ A terminal disclaimer (and disclaimer fee (37 CFR 1.20(d)) of $ _____ for a small entity or $ _____ for other than a small entity) disclaiming the required period of time is enclosed herewith (see PTO/SB/63).

4. STATEMENT: The entire delay in filing the required reply from the due date for the required reply until the filing of a grantable petition under 37 CFR 1.137(b) was unintentional. [NOTE: The United States Patent and Trademark Office may require additional information if there is a question as to whether either the abandonment or the delay in filing a petition under 37 CFR 1.137(b) was unintentional (MPEP 711.03(c), subsections (III)(C) and (D)).]

WARNING:

Petitioner/applicant is cautioned to avoid submitting personal information in documents filed in a patent application that may contribute to identity theft. Personal information such as social security numbers, bank account numbers, or credit card numbers (other than a check or credit card authorization form PTO-2038 submitted for payment purposes) is never required by the USPTO to support a petition or an application. If this type of personal information is included in documents submitted to the USPTO, petitioners/applicants should consider redacting such personal information from the documents before submitting them to the USPTO. Petitioner/applicant is advised that the record of a patent application is available to the public after publication of the application (unless a non-publication request in compliance with 37 CFR 1.213(a) is made in the application) or issuance of a patent. Furthermore, the record from an abandoned application may also be available to the public if the application is referenced in a published application or an issued patent (see 37 CFR 1.14). Checks and credit card authorization forms PTO-2038 submitted for payment purposes are not retained in the application file and therefore are not publicly available.

Signature	8/29/06 Date
Brian S. Steinberger Typed or printed name	36,423 Registration Number, if applicable
Law Offices Of Brian S. Steinberger Address	321-633-5080 Telephone Number
101 Brevard Ave., Cocoa, FL 32922 Address	

Enclosures:
- ☑ Fee Payment
- ☑ Reply
- ☐ Terminal Disclaimer Form
- ☑ Additional sheets containing statements establishing unintentional delay
- ☑ Other: Petition and attachments

CERTIFICATE OF MAILING OR TRANSMISSION [37 CFR 1.8(a)]

I hereby certify that this correspondence is being:

☑ Deposited with the United States Postal Service on the date shown below with sufficient postage as first class mail in an envelope addressed to: Mail Stop Petition, Commissioner for Patents, P. O. Box 1450, Alexandria, VA 22313-1450.

☐ Transmitted by facsimile on the date shown below to the United States Patent and Trademark Office as (571) 273-8300.

8/29/06 Date	Signature Brian S. Steinberger Typed or printed name of person signing certificate

In re application of:

Applicant	:	Wing-Kit Choi
Serial No.	:	10/643,063
Filed	:	08/18/2003
TC/A.U.	:	2871
Examiner	:	Dung T. Nguyen
Docket No.	:	UCF-372
Customer No.	:	23717
For	:	High Speed and Wide Viewing Angle Liquid Crystal Displays

IN THE UNITED STATES PATENT AND TRADEMARK OFFICE

Commissioner for Patents
Mail Stop Petition
P O Box 1450
Alexandria, VA 22313-1450

Honorable Commissioner:

The above-identified patent application became abandoned for failure to file a Request for Continued Examination (RCE) or a Notice of Appeal within six (6) months of receipt of the Final Office Communication dated November 1, 2005. No extensions of time were available.

Summary of Prosecution History:

The Examiner issued a Final Office Action, date November 1, 2005, in this application. Applicant filed a Response to Final Office Action on January 26, 2006, a copy of which is enclosed herewith. The Examiner issued an Advisory Action dated July 27, 2005. Prior to responding to the Final Office Action, Applicant telephoned the Examiner to discuss an amendment to put the application in condition for allowance. Applicant filed a Response to the Final Office Action on January 26, 2006 narrowing the claims to clarify the configuration of the common and pixel electrodes. Applicant awaited a Notice of Allowance from the USPTO. Applicant received an Advisory Action dated July 27, 2006. The statutory period to file a Request for Continued Examination (RCE) or a Notice of Appeal had already expired when the Examiner mailed the Advisory Action, therefore, Applicant had no opportunity to submit any further responses. In a telephone conference, the Examiner indicated that the response to the final Office Action had not been reviewed and that the USPTO would not enter the amendment filed in response to the Final Office Action dated November 1, 2005. In a subsequent telephone conference with the Examiner's supervisor, the Supervisor agreed to review the response filed January 26, 2006. In response to the review of the Final Office Action Response, the Examiner issued an Advisory Action dated July 28, 2006 indicating that the amendment had not been entered because it raised new issues that would require further consideration and/or search.

The above case history and attached documents from the relevant parties as to the causes of the unavoidable delays are filed herewith. This showing establishes that the delay in filing the required Request for Continued Examination (RCE) or Notice of Appeal was unavoidable under 37 C.F.R. 1.137(a)(3). In particular, first the Examiner failed to enter the amendment filed in response to the Final Office Action and issue a Notice of Allowance and second, the Examiner

failed to allow Applicant an opportunity to continue prosecution of this application by issuing an Advisory Action after the statutory period for response had expired. A Notice of Abandonment was issued by the USPTO on August 1, 2006.

Applicant and his Attorney further request that the Petition for Revival be accepted, and the patent application be revived as an unintentional error occurred.

If there are further requirements, please contact the undersigned immediately.

Respectfully submitted,

Brian S. Steinberger
Law Offices of Brian S. Steinberger, P. A.
PTO Registration No. 36,423
Customer No.: 23717
321 633-5080
Facsimile 321 633-9322

UNITED STATES PATENT AND TRADEMARK OFFICE

UNITED STATES DEPARTMENT OF COMMERCE
United States Patent and Trademark Office
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Alexandria, Virginia 22313-1450
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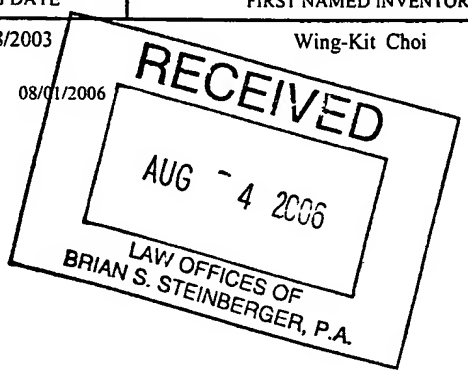
APPLICATION NO./ CONTROL NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.	CONFIRMATION NO.
10/643,063	08/18/2003	Wing-Kit Choi	UCF-372	4155

7590 08/01/2006

Brians S. Steinberger
101 Brevard Avenue
Cocoa, FL 32922



EXAMINER	
NGUYEN, DUNG T	

ART UNIT	PAPER NUMBER
2871	

DATE MAILED: 08/01/2006

Please find below and/or attached an Office communication concerning this application or proceeding.

Notice of Abandonment	Application No.	Applicant(s)	
	10/643,063	CHOI ET AL.	
	Examiner	Art Unit	
	Dung Nguyen	2871	

-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address--

This application is abandoned in view of:

1. ☒ Applicant's failure to timely file a proper reply to the Office letter mailed on *01 November 2005*.
   (a) ☐ A reply was received on _____ (with a Certificate of Mailing or Transmission dated _____), which is after the expiration of the period for reply (including a total extension of time of _____ month(s)) which expired on _____.
   (b) ☒ A proposed reply was received on *01/26/2006*, but it does not constitute a proper reply under 37 CFR 1.113 (a) to the final rejection.

   (A proper reply under 37 CFR 1.113 to a final rejection consists only of: (1) a timely filed amendment which places the application in condition for allowance; (2) a timely filed Notice of Appeal (with appeal fee); or (3) a timely filed Request for Continued Examination (RCE) in compliance with 37 CFR 1.114).
   (c) ☐ A reply was received on _____ but it does not constitute a proper reply, or a bona fide attempt at a proper reply, to the non-final rejection. See 37 CFR 1.85(a) and 1.111. (See explanation in box 7 below).
   (d) ☐ No reply has been received.

2. ☐ Applicant's failure to timely pay the required issue fee and publication fee, if applicable, within the statutory period of three months from the mailing date of the Notice of Allowance (PTOL-85).
   (a) ☐ The issue fee and publication fee, if applicable, was received on _____ (with a Certificate of Mailing or Transmission dated _____), which is after the expiration of the statutory period for payment of the issue fee (and publication fee) set in the Notice of Allowance (PTOL-85).
   (b) ☐ The submitted fee of $_____ is insufficient. A balance of $_____ is due.

   The issue fee required by 37 CFR 1.18 is $_____. The publication fee, if required by 37 CFR 1.18(d), is $_____.
   (c) ☐ The issue fee and publication fee, if applicable, has not been received.

3. ☐ Applicant's failure to timely file corrected drawings as required by, and within the three-month period set in, the Notice of Allowability (PTO-37).
   (a) ☐ Proposed corrected drawings were received on _____ (with a Certificate of Mailing or Transmission dated _____), which is after the expiration of the period for reply.
   (b) ☐ No corrected drawings have been received.

4. ☐ The letter of express abandonment which is signed by the attorney or agent of record, the assignee of the entire interest, or all of the applicants.

5. ☐ The letter of express abandonment which is signed by an attorney or agent (acting in a representative capacity under 37 CFR 1.34(a)) upon the filing of a continuing application.

6. ☐ The decision by the Board of Patent Appeals and Interference rendered on _____ and because the period for seeking court review of the decision has expired and there are no allowed claims.

7. ☐ The reason(s) below:

Dung Nguyen
Primary Examiner
Art Unit: 2871

Petitions to revive under 37 CFR 1.137(a) or (b), or requests to withdraw the holding of abandonment under 37 CFR 1.181, should be promptly filed to minimize any negative effects on patent term.

UNITED STATES PATENT AND TRADEMARK OFFICE

UNITED STATES DEPARTMENT OF COMMERCE
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APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.	CONFIRMATION NO.
10/643,063	08/18/2003	Wing-Kit Choi	UCF-372	4155

7590 07/28/2006

Brians S. Steinberger
101 Brevard Avenue
Cocoa, FL 32922

EXAMINER	
NGUYEN, DUNG T	
ART UNIT	PAPER NUMBER
2871	

DATE MAILED: 07/28/2006

Please find below and/or attached an Office communication concerning this application or proceeding.

Advisory Action Before the Filing of an Appeal Brief	Application No. 10/643,063	Applicant(s) CHOI ET AL.	
	Examiner Dung Nguyen	Art Unit 2871	

--The MAILING DATE of this communication appears on the cover sheet with the correspondence address --

THE REPLY FILED 26 January 2006 FAILS TO PLACE THIS APPLICATION IN CONDITION FOR ALLOWANCE.

1. ☒ The reply was filed after a final rejection, but prior to or on the same day as filing a Notice of Appeal. To avoid abandonment of this application, applicant must timely file one of the following replies: (1) an amendment, affidavit, or other evidence, which places the application in condition for allowance; (2) a Notice of Appeal (with appeal fee) in compliance with 37 CFR 41.31; or (3) a Request for Continued Examination (RCE) in compliance with 37 CFR 1.114. The reply must be filed within one of the following time periods:
   a) ☒ The period for reply expires *03* months from the mailing date of the final rejection.
   b) ☐ The period for reply expires on: (1) the mailing date of this Advisory Action, or (2) the date set forth in the final rejection, whichever is later. In no event, however, will the statutory period for reply expire later than SIX MONTHS from the mailing date of the final rejection.

   Examiner Note: If box 1 is checked, check either box (a) or (b). ONLY CHECK BOX (b) WHEN THE FIRST REPLY WAS FILED WITHIN TWO MONTHS OF THE FINAL REJECTION. See MPEP 706.07(f).

Extensions of time may be obtained under 37 CFR 1.136(a). The date on which the petition under 37 CFR 1.136(a) and the appropriate extension fee have been filed is the date for purposes of determining the period of extension and the corresponding amount of the fee. The appropriate extension fee under 37 CFR 1.17(a) is calculated from: (1) the expiration date of the shortened statutory period for reply originally set in the final Office action; or (2) as set forth in (b) above, if checked. Any reply received by the Office later than three months after the mailing date of the final rejection, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

NOTICE OF APPEAL

2. ☐ The Notice of Appeal was filed on _____. A brief in compliance with 37 CFR 41.37 must be filed within two months of the date of filing the Notice of Appeal (37 CFR 41.37(a)), or any extension thereof (37 CFR 41.37(e)), to avoid dismissal of the appeal. Since a Notice of Appeal has been filed, any reply must be filed within the time period set forth in 37 CFR 41.37(a).

AMENDMENTS

3. ☒ The proposed amendment(s) filed after a final rejection, but prior to the date of filing a brief, will not be entered because
   (a) ☒ They raise new issues that would require further consideration and/or search (see NOTE below);
   (b) ☐ They raise the issue of new matter (see NOTE below);
   (c) ☐ They are not deemed to place the application in better form for appeal by materially reducing or simplifying the issues for appeal; and/or
   (d) ☒ They present additional claims without canceling a corresponding number of finally rejected claims.

   NOTE: *See Continuation Sheet*. (See 37 CFR 1.116 and 41.33(a)).
4. ☐ The amendments are not in compliance with 37 CFR 1.121. See attached Notice of Non-Compliant Amendment (PTOL-324).
5. ☐ Applicant's reply has overcome the following rejection(s): _____.
6. ☐ Newly proposed or amended claim(s) _____ would be allowable if submitted in a separate, timely filed amendment canceling the non-allowable claim(s).
7. ☒ For purposes of appeal, the proposed amendment(s): a) ☒ will not be entered, or b) ☐ will be entered and an explanation of how the new or amended claims would be rejected is provided below or appended.
   The status of the claim(s) is (or will be) as follows:
   Claim(s) allowed: _____.
   Claim(s) objected to: _____.
   Claim(s) rejected: *1-3,5,7,8,10-18*.
   Claim(s) withdrawn from consideration: _____.

AFFIDAVIT OR OTHER EVIDENCE

8. ☐ The affidavit or other evidence filed after a final action, but before or on the date of filing a Notice of Appeal will not be entered because applicant failed to provide a showing of good and sufficient reasons why the affidavit or other evidence is necessary and was not earlier presented. See 37 CFR 1.116(e).
9. ☐ The affidavit or other evidence filed after the date of filing a Notice of Appeal, but prior to the date of filing a brief, will not be entered because the affidavit or other evidence failed to overcome all rejections under appeal and/or appellant fails to provide a showing a good and sufficient reasons why it is necessary and was not earlier presented. See 37 CFR 41.33(d)(1).
10. ☐ The affidavit or other evidence is entered. An explanation of the status of the claims after entry is below or attached.

REQUEST FOR RECONSIDERATION/OTHER

11. ☐ The request for reconsideration has been considered but does NOT place the application in condition for allowance because: _____.
12. ☐ Note the attached Information Disclosure Statement(s). (PTO/SB/08 or PTO-1449) Paper No(s). _____
13. ☐ Other: _____.

Dung Nguyen
Primary Examiner
Art Unit: 2871

Continuation of 3. NOTE: the new amended claims would require further consideration and search.

Auto-Reply Facsimile Transmission

TO: Fax Sender at 321 633 9322

Fax Information
Date Received: 1/26/2006 1:27:36 PM [Eastern Standard Time]
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Received Cover Page =======>

JAN-26-2006 THU 02:45 PM BRIAN S STEINBERGER PA FAX NO. 321 633 9322 P. 01

IN THE UNITED STATES PATENT AND TRADEMARK OFFICE

Applicant	:	Wing-Kit Choi
Serial No.	:	10/643,063
Filed	:	08/18/2003
TC/A.U.	:	2871
Examiner	:	Jeanne A. Di Grazio
Docket No.	:	UCF-372
Customer No.	:	23717
For	:	High Speed and Wide Viewing Angle Liquid Crystal Displays

Commissioner of Patents
P.O. Box 1450
Alexandria, VA 22313-1450

Honorable Commissioner:

I enclose the following papers:

1. Amendment and Remarks 15 pages

Please enter the above correspondence.

Respectfully submitted,

Brian S. Steinberger
Attorney at Law
PTO Registration No. 36,423
101 Brevard Avenue
Cocoa, Florida 32922
(321) 633-5080 Facsimile (321) 633-9322

CERTIFICATE OF TRANSMISSION (37 CFR 1.8a)
I hereby certify that this paper, along with any paper referred to as being attached, is being facsimile transmitted to the Central fax 571-273-8300 on the date shown below and including 15 pages.

1/26/06
Date

Brian S. Steinberger
(Name of Person Transmitting Attached Papers)

(Signature of Person Transmitting Attached Papers)

PAGE 1/15 * RCVD AT 1/26/2006 1:27:36 PM [Eastern Standard Time] * SVR:USPTO-EFXRF-4/26 * DNIS:2738300 * CSID:321 633 9322 * DURATION (mm-ss):04-29

IN THE UNITED STATES PATENT AND TRADEMARK OFFICE

Applicant	:	Wing-Kit Choi
Serial No.	:	10/643,063
Filed	:	08/18/2003
TC/A.U.	:	2871
Examiner	:	Jeanne A. Di Grazio
Docket No.	:	UCF-372
Customer No.	:	23717
For	:	High Speed and Wide Viewing Angle Liquid Crystal Displays

Commissioner of Patents
P.O. Box 1450
Alexandria, VA 22313-1450

Honorable Commissioner:

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1. Amendment and Remarks 15 pages

Please enter the above correspondence.

Respectfully submitted,

Brian S. Steinberger
Attorney at Law
PTO Registration No. 36,423
101 Brevard Avenue
Cocoa, Florida 32922
(321) 633-5080 Facsimile (321) 633-9322

CERTIFICATE OF TRANSMISSION (37 CFR 1.8a)

I hereby certify that this paper, along with any paper referred to as being attached, is being facsimile transmitted to the Central fax 571-273-8300 on the date shown below and including 15 pages.

1/26/05
Date

Brian S. Steinberger
(Name of Person Transmitting Attached Papers)

(Signature of Person Transmitting Attached Papers)

Amendment to the Claims:

This listing of the claims will replace all prior versions, and listings, of claims in the application.

Listing of Claims:

Claim 1 (Currently amended). A thin film transistor liquid crystal display having fast response and wide viewing angle, comprising:

a first substrate with a continuous first common electrode layer;

a second substrate with both a continuous pixel electrode layer and a discontinuous second common electrode layer, wherein the discontinuous second common electrode layer includes plural second common electrodes having a gap between adjacent second common electrodes;

liquid crystal between the first substrate and the second substrate; and

means for generating an electric field between the first common electrode layer in the first substrate and both the continuous pixel electrode layer and the discontinuous second common electrode layer in the second substrate by applying different voltage to the continuous first common electrode layer and the discontinuous second common electrode layer so that the display provides fast response to high input data rates and allows for wide viewing angles for viewers.

Claim 2 (Previously presented). The display of claim 1, wherein the electric field generating means has:

the discontinuous second common electrode layer separated from the pixel electrode layer by an insulation layer in the second substrate.

Claim 3 (Currently amended). The display of claim 1 further comprising:

means for applying a first voltage to the continuous first common electrode layer; and

means for applying a second voltage to the discontinuous second common electrode layer, wherein the first voltage is not equal to the second voltage.

Claim 4 (Canceled).

Claim 5 (Currently amended). The display of claim 1, further comprising:

means for supplying a voltage source to the continuous pixel electrode layer.

Claims 6 (Canceled).

Claim 7 (Currently amended). The display of claim 3, wherein the first voltage applied to the continuous first common electrode is higher than the second voltage applied to the discontinuous second common electrode layer.

Claim 8 (Currently amended). The display of claim 3, wherein the second voltage applied to the discontinuous second common electrode layer is higher than the first ~~second~~ voltage applied to the continuous first common electrode layer.

Claim 9 (Canceled).

Claim 10 (Currently amended). The display of claim 2, further comprising:

a dielectric layer adjacent to the continuous first common electrode to increase a lateral field strength in an upper portion of the liquid crystal to improve a light efficiency of the thin film transistor liquid crystal display.

Claim 11 (Currently amended). The display of claim 8, wherein a third voltage applied to the continuous pixel electrode layer is equal to the first voltage to generate a non-vertical electric field.

Claim 12 (Currently amended). The display of claim 7, wherein a third voltage applied to the continuous pixel electrode layer is equal to the second voltage to generate a vertical electric field.

Claim 13 (Currently amended). A method of providing fast response and wide viewing angle to thin film transistor liquid crystals displays, comprising the steps of:

providing a liquid crystal layer between a first substrate and a second substrate; and

generating an electric field in the liquid crystal layer between the first and second substrates, wherein a first voltage is applied to a ~~first substrate with a~~ continuous first common electrode layer on the first substrate, ~~a second substrate with~~ and a second

different voltage is applied to a discontinuous second common electrode layer having plural spaced apart second common electrodes on the second substrate and applying a third voltage to a pixel electrode layer on the second substrate for fast responses to input data and wide viewing angles for viewers.

Claim 14 (Currently amended). The method of claim 13 ~~claim 3~~, wherein the step of generating an electric field includes the step of:

applying the third voltage to the pixel electrode layer that is approximately equal to the second voltage of the discontinuous second common electrode layer ~~in the second substrate~~, wherein the pixel electrode layer is continuous and the equal voltage generates a uniform, vertical electric field ~~occurs~~.

Claim 15 (Currently amended). The method of claim 13, wherein the step of generating an electric field includes the step of:

applying ~~a first~~ the third voltage to the pixel electrode layer ~~and a second voltage to the discontinuous second common electrode layer~~, wherein the ~~first~~ third voltage is unequal to the second voltage in the discontinuous second common electrode layer so that a non-vertical electric field occurs.

Claim 16 (Currently amended). The method of claim 15, wherein the step of generating a non-vertical electric field includes the step of:

forming a discontinuous pixel electrode layer having plural spaced apart pixel electrodes alternating with the ~~discontinuous~~ plural spaced apart second common

electrodes ~~electrode layer~~ so that ~~the discontinuous~~ each one of the plural pixel electrodes ~~electrode layer~~ is adjacent to one of the plural ~~the discontinuous~~ second common electrodes ~~electrode layer~~ in the same plane; and

forming a resistive layer between the discontinuous pixel electrode layer and the discontinuous second common electrode layer, wherein the discontinuous pixel electrode layer and alternating adjacent discontinuous second common electrode layer are adjacent to the liquid crystal layer;

~~applying a first voltage to the discontinuous second common electrode layer;~~ and

applying a the third ~~second~~ voltage to the discontinuous pixel electrode layer that is equal to the second voltage ~~that is unequal to the first voltage applied to the alternating discontinuous second common electrode layer~~ so that a horizontal electric field is generated between the discontinuous pixel electrode layer and the discontinuous second common ~~pixel~~ electrode layer so that a longer lateral electric field occurs.

Claim 17 (Canceled).

Claim 18 (Currently amended). The method of claim 13, wherein the ~~applied voltage to each of the electrode layers includes the step of applying an unequal voltage between the first common electrode layer and the discontinuous second common electrode layer, wherein a~~ third voltage applied to the pixel electrode ~~voltage~~ depends on the input data to generate a vertical electric field when the input data is high and a non-vertical field when the input data is low.

Claim 19 (New). A thin film transistor liquid crystal display having fast response and wide viewing angle, comprising:

a first substrate with a continuous first common electrode layer;

a second substrate with both a discontinuous pixel electrode layer having plural spaced apart pixel electrodes and a discontinuous second common electrode layer having plural spaced apart second common electrodes, wherein the each one of the plural pixel electrodes alternates with an adjacent one of the plural common electrodes in the same plane and having a gap therebetween;

liquid crystal between the first substrate and the second substrate; and

means for generating an electric field between the first and second substrate by applying a first voltage to the continuous first common electrode layer and applying a different second voltage to the discontinuous second common electrode layer so that the display provides fast response to high input data rates and allows for wide viewing angles for viewers.

Claim 20 (New). The display of claim 19, wherein the electric field generation means further comprises:

applying the first voltage to the discontinuous pixel electrode to produce a lateral field between the discontinuous pixel electrode layer and the discontinuous second common electrode layer to switch liquid crystal molecules during a bright state.

REMARKS/ARGUMENTS

Favorable consideration of this application is respectfully requested. Applicant has amended claims 1, 5, 7, 8, 10-16 and 18, canceled claims 4, 6, 7, 9 and 17 and added new claims 19 and 20. Favorable reconsideration of this application is, consequently, earnestly solicited in view of the following remarks. Applicant thanks Examiners Jeanne DiGrazio and Andrew Schechter for the interview on January 17, 2006 to discuss amendment to the claims to put them in condition for allowance or alternatively, remove the finality of the action and making a non-final rejection. No new issues or considerations are being raised.

During the telephone interview Examiner Di Grazio remained silent. Amended claim 1 was the subject of the discussion. Examiner Schechter objected to the terminology used in the claim to describe the arrangement of the first common electrode, second common electrode and pixels electrodes within the LCD. The objected to terminology includes the terms "discontinuous" and "continuous". As a basis for the objection to the terminology, Examiner Schechter referenced Fig. 9 of Matsuyama which shows a front view of the LCD shown in the cross-sectional view of Fig. 10.

In the front view, the "discontinuous" electrodes appear as spaced apart branches of "continuous" electrodes. Examiner Schechter suggested replacing the term "discontinuous" with the term "segmented". Examiner Schechter refused to address the other differences between Matsuyama and claim 1. Instead, he objected to the fact that the subject application failed to provide front view drawings corresponding to the cross sectional views submitted with the original application.

All attempts to redirect the interview back to the Fig. 2 cross section view of the subject application with the cross sectional views in Figs 4 and 10 of the Matsuyama patent failed. Examiner Schechter refused to discuss cross sectional views. Following the discussion with Examiners DiGrazio and Schecter, Applicant was notified that all future communication in regard to amendment of the claims should be directed to Schechter. Examiner Di Grazio also identified col. 18, lines 15-35 as a basis for the rejection of the added limitation wherein the voltage applied to the first common electrode is different than the voltage applied to the second common electrode.

First, prior to the telephone interview, Applicant had not received a section 112 rejection to the terms "discontinuous" and "continuous" as used throughout the specification and the claims. The terms are clearly defined in the specification of the subject application. The term "continuous" is defined on page 1, lines 21-22 as extending to all pixels of the whole display. An electrode may be termed "discontinuous" by design and is collectively referred to as one layer (page 7, lines 19-20). Examiner Schechter indicated that he would not allow claims that included the terminology. Since this action is FINAL, and the section 112 objection of the terminology "discontinuous" and "continuous" was not previously raised in an office communication, the objection is a new basis for rejection. Therefore, the Examiner is required to provide a non-final action describing the new basis for the objection of the claim terminology to allow Applicant with an opportunity to overcome the objection.

Changing the terminology used in the claims in response to a final rejection that does not include an objection to the terminology may be considered non-responsive. Alternatively, an amendment using "new" terminology may be determined to contain new matter and the Examiner may not enter the amendment. Therefore, the terminology used in the original specification and claims is used in the amended claims in response to the final action.

Second, the rejection of claim 1 was based on Fig. 4 in combination with Fig. 10. Both figures are cross section views which were used by Examiner Di Grazio in the final office action to reject claims 1-3, 5 and 11-12. Since Examiner Schechter is relying on Fig. 9 as the basis for his rejection and Fig. 9 was not identified in a previous office action, Examiner is required to provide a non-final action specifically pointing out the basis of the rejection of the claims based on Fig. 9.

Because Examiner Di Grazio rejected the claims on the basis of Figs. 4 and 10, and not Fig. 9, this response includes remarks and arguments directed to the basis of the rejection.

Third, in regard to the different voltage limitation, col. 18, lines 15-35 merely discloses that the voltages applied to the first and second common electrodes should be constant values, not changing values. Since the cited lines describe the voltages applied to the common electrodes shown in Fig. 4, col. 17, lines 17-27 discloses what the voltage

should be. Lines 22-25 give an example of applying 0 volts to each of the first and second common electrodes. The voltage difference is between the pixel electrode and each of the first and second common electrode, thus the same voltage is applied to the first and second common electrodes.

The final action referred to Fig. 4 in regard to the voltages applied to the electrodes, therefore, the voltages disclosed in col. 17 lines 17-27 are used to compare Matsuyama with the subject application in response to the rejection.

Claim Rejections 35 U.S.C. §103(a):

Claims 1, 2, 3, 5 and 11-12 are rejected under 35 U.S.C. 103(a) as being unpatentable over United States Patent 6,469,765 B1 (Matsuyama) filed on June 13, 2000.

Matsuyama (col. 17, lines 17-21 and Fig. 4) discloses a first common electrode (500) that is continuous and a second common electrode (400) that is also continuous, unlike the subject application wherein the second common electrode (23, 53, , 62, 71 and 92) is discontinuous (Figures 2-7 and 9). The term "continuous" is defined on page 1, lines 21-22 as extending to all pixels of the whole display. An electrode may be termed "discontinuous" by design and is collectively referred to as one layer (page 7, lines 19-20).

In the final action, Examiner alleges that Matsuyama Fig. 4 discloses the limitations of previously amended claim 1 except the discontinuous second common electrode to which Examiner refers to Fig. 10 of Matsuyama. Fig. 10 discloses a discontinuous pixel electrode and a discontinuous common electrode. No such limitation exists in previously amended claim 1. Instead, the common electrode is discontinuous and the pixel electrode can be continuous (Fig. 2) or discontinuous (Fig. 7). Examiner has combined two different Matsuyama embodiments (Figs. 4 and 10) to produce the claimed configuration without specifically pointing out a teaching to combine the two embodiments. Matsuyama includes plural embodiments, a first embodiment (Figs. 1-6), a second embodiment (Figs. 7-8), a third embodiment (Figs. 9-10), and a fourth embodiment (Figs. 11-13). None of the embodiments included the limitation suggested

by the Examiner in the combination of the first and third embodiments shown in Figs. 4 and 10.

Examiner cannot pick pieces of one embodiment (Fig. 4) and combine them with a different embodiment (Fig. 10) for the purpose of producing the LCD claimed in claims 1-12 of the subject application without specifically pointing out a teaching in the prior art to make the suggested combination. Matsuyama does not teach a continuous first common electrode and a discontinuous second common electrode in combination with a continuous pixel electrode as shown in Fig. 4 and claimed in claim 1.

In regard to the voltages applied to the electrodes, Matsuyama discloses applying the same voltage to the first common electrode and the second common electrode (col. 17, lines 17-27) and that the voltage is constant, not varying (col. 18, lines 15-35). Claim 1 has been further amended to clarify that the voltage applied to the continuous first and the discontinuous second common electrodes are different. Applying the voltages pointed out by Examiner to the electrode configuration claimed in claim 1 would produce an inoperable display. A combination that creates an inoperable reference teaches away from the combination.

Applicant has amended claim 1 to clarify that the discontinuous second common electrode layer includes plural second common electrodes having a gap between adjacent second common electrodes as disclosed on page 7 lines 19-20 and shown in Fig. 2. Applicant has further amended claim 1 to claim the subject matter shown in Fig. 2-5 and 9 wherein the pixel electrode is continuous. Applicant has further amended claim 1 to clarify that the voltage applied to the first and second common electrodes are different. For the reasons provided, Applicant believes that claim 1 is allowable over Matsuyama, thus removal of the rejection is requested.

In regard to claim 2, Applicant agrees with Examiner that the pixel electrode and the second common electrode in Matsuyama and the subject application are separated by a insulation layer. However, since claim 2 depends from amended claim 1, for the reason provided in regard to claim 1, Applicant believes that claim 2 is allowable and requests removal of the rejection.

In regard to claims 3 and 5, in Matsuyama the voltage applied to the electrodes in the first embodiment is different from the voltages applied to the electrodes in the fourth

embodiment. In fact, the difference in voltages applied to the electrodes is determined by the configuration of the electrodes. Since Matsuyama does not provide an embodiment combining the configurations in shown in Figs. 4 and 10, likewise, Matsuyama does not disclose voltages that would be applied to electrodes having the configuration claimed in claims 3 and 5.

Examiner has cited the voltages applied to the first embodiment (Fig. 4) of Matsuyama as the basis of the rejection. However, the configuration of the electrodes shown in Matsuyama Fig. 4 are not the same configuration claimed in claims 3 and 5. The basis of the rejection of claims 3-5 is not consistent with the basis for the rejection of claim 1 and therefore the rejection is improper. Examiner is required to specifically point out the basis for the rejection. Since Examiner basis for rejecting claims 3 and 5 is the voltages applied to the first embodiment shown in Fig. 4, and the basis for the rejection of claim 1 is a combination of the configurations shown in Figs. 4 and 10, the basis cannot be used to reject claims 3 and 5 because the voltages do not apply to the combined Matsuyama embodiments.

Furthermore, claims 7 and 8 of the subject application were not rejected and the claims clearly recite applying different voltages to the first and the second common electrodes. Claim 5 has been amended to correspond with amended claim 1 wherein the pixel electrode is continuous. For these reasons, and the reasons provided in regard to claim 1, Applicant believes that claims 3 and 5 are allowable and requests removal of the rejection.

In regard to claims 11 and 12, Examiner alleges that Matsuyama teaches the vertical and non-vertical electric fields. Again, Examiner's allegation is not supported by Matsuyama. Instead, Examiner continues to point out the electric fields generated by application of specific voltages (col. 17, lines 17-17) to electrodes having the configuration shown in Fig. 4. Claims 11 and 12 depend from base claim 1 which is not shown in Fig. 4 of Matsuyama. Examiner improperly based the rejection of claim 1 on the combination of the first embodiment and third embodiment shown in Figs. 4 and 10.

Matsuyama does not teach or suggest the electrode configuration claimed in base claim 1 and Examiner has failed to specifically point out a teaching to combine the embodiments. Furthermore, since Matsuyama does not teach or suggest the configuration

claimed in claim 1, Matsuyama does not teach the voltages that would be applied to electrodes having such a configuration or the electric field that would be generated by application of the voltages claimed in claim 3.

Examiner has rejected claims 11 and 12 on the basis of the electric fields that would be generated in the first embodiment and the electrode configuration of claims 11 and 12 is not the configuration shown in Fig. 4 of Matsuyama. Furthermore, claims 7 and 8 of the subject application were not rejected and the claims clearly recite applying different voltages to the first and the second common electrodes which are not the voltages applied in Fig. 4 of Matsuyama. For the reasons provided, and the reasons provided in regard to claims 1, 2, 3 and 5, Applicant believes that claims 11 and 12 are allowable under section 103(a) and requests removal of the rejection.

Claims 7 and 8 were not rejected and are therefore considered allowable.

Claims 10, 13 and 18 were rejected under 35 U.S.C. 103(a) as being unpatentable over Matsuyama in view of Nakanishi. Examiner acknowledges that Matsuyama does not teach a dielectric layer adjacent to a common electrode and has combined Nakanishi to provide the missing dielectric layer. Applicant agrees that Nakanishi discloses use of a dialecric layer adjacent to a common electrode layer.

In regard to claim 10, a combination including Nakanishi fails the overcome the deficiencies in the Matsuyama reference. Since claim 10 depends from base claim 1, for the reasons provided in regard to claim 1, applicant believes that claim 10 is allowable and requests removal of the rejection.

In regard to claims 13-18, Applicant has amended claim 13 to clarify that the first common electrode is continuous and that the second common electrode layer is discontinuous. Claim 13 has been further amended to add the limitation of applying a first voltage to the continuous first common electrodes and applying a different voltage to the discontinuous second common electrode. Claims 7 and 8 claimed different voltage applied to the first and second common electrodes. Claims 7 and 8 were not rejected. For the reason provided and the reasons provided in regard to claim 1, Applicant believes that amended claim 13 is allowable over the cited references.

Claim 14 has been previously amended to further clarify that the pixel electrode layer is continuous. Nakanishi discloses a liquid crystal display having a resistive

insulating layer (26A) between the bottom common electrode (23A) and the pixel electrode (25A), however, the pixel electrode is not continuous. For this reason, Applicant believes that claim 14, as amended, overcomes the rejection and requests removal of the rejection.

Claim 15 has been amended to claim the subject matter shown in Figs. 4, 7 and 9 wherein the voltage applied to the pixel electrode is not equal to the second voltage applied to the discontinuous second common electrode.

In regard to claim 16, Applicant has amended claims 16 to clarify that the pixel electrode and the second common electrode are discontinuous and that the discontinuous pixel and second common electrodes are alternating electrodes as shown in Fig. 7 and described on page 10, lines 14-24. Claim 16 has been further amended to clarify that the discontinuous pixel and second common electrode are adjacent to the liquid crystal layer and that the voltage applied to the discontinuous pixel and discontinuous second common electrodes are equal to form an electric field between the pixel electrode and the second common electrode. For these reasons, and the reasons provided in regard to base claim 13, Applicant believes that amended claim 16 overcomes the rejection and requests removal of the rejection.

Claim 17 has been canceled.

In regard to claim 18, has been amended to clarify that the voltage applied to the pixel electrode depends on the input data. For the reasons provided in regard to claim 13, Applicant believes that claim 18 is allowable under section 103(a) and requests removal of the rejection

New claims 19 and 20 have been added to claim the subject matter shown in Fig. 7 of the subject application wherein the pixel electrode layer and the second common electrode layer are discontinuous and have plural spaced apart pixel electrodes and plural spaced apart second common electrodes, respectively. Claim 19 further recites that the plural pixel electrodes and plural second common electrodes are alternately located in the same plane. Because neither Matsuyama nor Nakanishi disclose a LCD having alternating discontinuous pixel and second common electrodes located in the same plane, New claims 19-20 claim the subject matter previously claimed base claims 1 and 13 of

the original application and in previously amended base claim 13 and dependent claim 16. Applicant believes that claims 19 and 20 are allowable.

In view of the foregoing considerations, it is respectfully urged that claims 1-3, 5, 7, 8, and 10-16 and 18-20 be allowed or alternatively, remove the finality of the action and making a non-final rejection. No new issues or considerations are being raised. Such action is respectfully requested. If the Examiner believes that an interview would be helpful, the Examiner is requested to contact the attorney at the below listed number.

Respectfully Submitted;

Brian S. Steinberger
Registration No. 36,423
101 Brevard Avenue
Cocoa, Florida 32922
Telephone: (321) 633-5080

Date 1/26/05

P. 01

TRANSACTION REPORT

JAN-26-2006 THU 02:49 PM

DATE START	RECEIVER	TX TIME	PAGES	TYPE	NOTE	M#	DP
JAN-26 02:45 PM	15712738300	4'18"	15	SEND	OK	287	

TOTAL : 4M 18S PAGES: 15

IN THE UNITED STATES PATENT AND TRADEMARK OFFICE

Applicant	:	Wing-Kit Choi
Serial No.	:	10/643,063
Filed	:	08/18/2003
TC/A.U.	:	2871
Examiner	:	Jeanne A. Di Grazio
Docket No.	:	UCF-372
Customer No.	:	23717
For	:	High Speed and Wide Viewing Angle Liquid Crystal Displays

Commissioner of Patents
P.O. Box 1450
Alexandria, VA 22313-1450

Honorable Commissioner:

I enclose the following papers:

1. Amendment and Remarks 15 pages

Please enter the above correspondence.

Respectfully submitted.

P. 01

TRANSACTION REPORT

JAN-12-2006 THU 03:01 PM

DATE START	RECEIVER	TX TIME	PAGES	TYPE	NOTE	M#	DP
JAN-12 02:59 PM	15712732289	1'54"	6	SEND	OK	220	

TOTAL : 1M 54S PAGES: 6

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FACSIMILE TRANSMITTAL SHEET

TO: JEANNE DI GRAZIO	FROM: PHYLLIS K. WOOD LAW OFFICES OF BRIAN S. STEINBERGER
COMPANY: USPTO - ART UNIT 2871	DATE: JANUARY 12, 2006
FAX NUMBER 571-273-2289	TOTAL NO. OF PAGES INCLUDING COVER: 6
PHONE NUMBER: 571-272-2289	SENDER'S REFERENCE NUMBER: UCF-372

Appl. No. 10/643,063

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Appl. No. 10/643,063

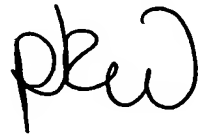
☐ URGENT ☐ FOR REVIEW ☐ PLEASE COMMENT ☐ PLEASE REPLY ☐ PLEASE RECYCLE

Jeanne,

Thank you for the telephone call this morning to reschedule the telephone meeting that was rescheduled to January 12 (originally scheduled for January 6, 2006).

I have drafted amended claims for review with your supervisor prior to the meeting. With the draft amendments and suggestion during a future interview, I am certain that we can put the claims in condition for allowance.

Phyllis



DRAFT CLAIMS rev. 2
FOR DISCUSSION ONLY
January 12, 2006

Listing of Claims:

Claim 1 (Currently amended). A thin film transistor liquid crystal display having fast response and wide viewing angle, comprising:

a first substrate with a continuous first common electrode layer;

a second substrate with both a pixel electrode layer and a discontinuous second common electrode layer;

liquid crystal between the continuous first common electrode layer on the first substrate and the discontinuous second common electrode layer on the second substrate; and

remove Fig. 10

means for generating an electric field between the continuous first common electrode layer in the first substrate and both the pixel electrode layer and the discontinuous second common electrode layer the second substrate by applying a different voltage that is not dependent of input data to the continuous first common electrode and the discontinuous second common electrode to drive both a turn-on and turn-off state of the display so that the display provides fast response to high input data rates and allows for wide viewing angles for viewers.

add pixel voltage data dependent

Claim 2 (Previously presented). The display of claim 1, wherein the electric field generating means has:

the discontinuous second common electrode layer separated from the pixel electrode layer by an insulation layer in the second substrate.

Claim 3 (Canceled).

Claim 4 (Canceled).

DRAFT CLAIMS rev. 2
FOR DISCUSSION ONLY
January 12, 2006

Claim 5 (Currently amended). The display of claim 1, further comprising:

means for applying ~~supplying~~ a voltage ~~source~~ to the pixel electrode layer that is dependent on an input data.

Claim 6 (Canceled).

Claim 7 (Currently amended). The display of claim 3, wherein the first voltage applied to the continuous first common electrode is higher layer than the second voltage applied to the discontinuous second common electrode layer.

Claim 8 (Currently amended). The display of claim 3, wherein the second voltage applied to the discontinuous second common electrode layer is higher than the first ~~second~~ voltage applied to the continuous first common electrode layer.

Claim 9 (Canceled).

Claim 10 (Currently amended). The display of claim 2, further comprising:

a dielectric layer adjacent to the continuous first common electrode layer to increase a lateral field strength in an upper portion of the liquid crystal to improve a light efficiency of the thin film transistor liquid crystal display.

Claim 11 (Previously presented). The display of claim 8, wherein a third voltage applied to the pixel electrode layer is equal to the first voltage to generate a non-vertical electric field.

DRAFT CLAIMS rev. 2
FOR DISCUSSION ONLY
January 12, 2006

Claim 12 (Previously presented). The display of claim 7, wherein a third voltage applied to the pixel electrode layer is equal to the second voltage to generate a vertical electric field.

Claim 13 (Previously presented). A method of providing fast response and wide viewing angle to thin film transistor liquid crystals displays, comprising the steps of:

providing a liquid crystal layer between a first substrate and a second substrate; and

generating an electric field between the substrates, wherein a different voltage is applied to a first substrate with a first common electrode layer, and a second substrate with a discontinuous second common electrode layer and applying an input data dependent voltage to a pixel electrode layer to drive both a turn-on and turn-off mode of the displays, for fast responses to input data and wide viewing angles for viewers.

Claim 14 (Previously presented). The method of claim 3, wherein the step of generating an electric field includes the step of:

applying voltage to the pixel electrode layer that is approximately equal to the voltage of the discontinuous second common electrode layer in the second substrate, wherein the pixel electrode layer is continuous and the equal voltage generates a uniform, vertical electric field occurs.

Claim 15 (Previously presented). The method of claim 13, wherein the step of generating an electric field includes the step of:

applying a first voltage to the pixel electrode layer and a second voltage to the discontinuous second common electrode layer, wherein the first voltage is unequal to the second voltage in the discontinuous second common electrode layer so that a non-vertical electric field occurs.

Claim 16 (Previously presented). The method of claim 15, wherein the step of generating a non-vertical electric field includes the step of:

forming a discontinuous pixel electrode alternating with the discontinuous second common electrode layer so that the discontinuous pixel electrode layer is adjacent to the discontinuous second common electrode layer;

forming a resistive layer between the discontinuous pixel electrode layer and the discontinuous second common electrode layer, wherein the discontinuous pixel electrode layer and adjacent discontinuous second common electrode layer are adjacent to the liquid crystal layer;

applying a first voltage to the discontinuous second common electrode layer; and

applying a second voltage to the discontinuous pixel electrode layer that is unequal to the first voltage applied to ~~of~~ the alternating discontinuous second common electrode layer so that a horizontal electric field is generated between the discontinuous pixel electrode layer and the discontinuous second common pixel electrode layer so that a longer lateral electric field occurs.

Claim 17 (Previously presented). The method of claim 15, wherein the step of generating a non-vertical electric field includes the step of:

forming a dielectric layer on the first common electrode layer adjacent to the liquid crystal layer; and

applying a voltage to the pixel electrode so that generates a strong electric field between the pixel electrode layer and the discontinuous second common electrode layer so that improved light efficiency occurs.

Claim 18 (Currently amended). The method of claim 13, wherein the applied voltage to each of the electrode layers includes the step of applying an unequal voltage between the first common electrode layer and the discontinuous second common electrode layer, wherein a pixel electrode voltage depends on the input data to generate a vertical electric field when the input data is high and a non-vertical field when the input data is low.

From: DiGrazio, Jeanne
To: brianss.pkwood@vol.com
Cc: Schechter, Andrew
Date: 1/12/2006 1:36:19 PM
Subject: RE: 10/643,063

Phyllis,

Can we do the interview on Tuesday, January 17th at around 10:30AM?

Jeanne A. Di Grazio
Patent Examiner
United States Patent and Trademark Office
Art Unit 2871
Office: Jefferson 4B19
Phone: (571)272-2289
Fax: (571)273-2289

From: DiGrazio, Jeanne
To: brianss.pkwood@vol.com
Date: 1/12/2006 1:38:35 PM
Subject: RE: Update on Interview

Phyllis:

Andrew is in now but he has laryngitis - he has to whisper - so it's best to set the interview time for early next week.

-----Original Message-----
From: Phyllis Wood [mailto:brianss.pkwood@vol.com]
Sent: Thursday, January 12, 2006 1:29 PM
To: DiGrazio, Jeanne
Subject: RE: Update on Interview

Thanks for the update. I was just drafting new amended claims with additional limitations to fax for you and Andrew to review before the meeting. Thought it might save some time.

pk

> [Original Message]
> From: DiGrazio, Jeanne <Jeanne.DiGrazio@USPTO.GOV>
> To: <brianss.pkwood@vol.com>
> Date: 1/12/2006 1:23:00 PM
> Subject: Update on Interview
>
> Phyllis,
>
> Andrew is still not in today - I'm not sure when he'll return for the remainder of this week. Again, I sincerely apologize for the rescheduling and I do appreciate your patience. As soon as I see Andrew, I'll get in touch with you.
>
> Jeanne A. Di Grazio
> Patent Examiner
> United States Patent and Trademark Office
> Art Unit 2871
> Office: Jefferson 4B19
> Phone: (571)272-2289
> Fax: (571)273-2289
>
>

TRANSACTION REPORT

P.01

NOV-30-2005 WED 04:22 PM

DATE START	RECEIVER	TX TIME	PAGES	TYPE	NOTE	M#	DP
NOV-30 04:21 PM	15712732289	59"	3	SEND	OK	065	

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Conf. w/ Examiner 1/6/06

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TO: JEANNE DI GRAZIO	FROM: PHYLLIS K. WOOD LAW OFFICES OF BRIAN S. STEINBERGER
COMPANY: USPTO, ART UNIT 2871	DATE: 11/30/2005
FAX NUMBER 571-273-2289	TOTAL NO. OF PAGES INCLUDING COVER: 3
PHONE NUMBER: 571-272-2289	SENDER'S REFERENCE NUMBER: UCF-372

Appl. No. 10/643,063 filed on 08/18/2003

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COMPANY: USPTO, ART UNIT 2871	DATE: 11/30/2005
FAX NUMBER 571-273-2289	TOTAL NO. OF PAGES INCLUDING COVER: 3
PHONE NUMBER: 571-272-2289	SENDER'S REFERENCE NUMBER: UCF-372

Appl. No. 10/643,063 filed on 08/18/2003

☐ URGENT ☐ FOR REVIEW ☐ PLEASE COMMENT ☐ PLEASE REPLY ☐ PLEASE RECYCLE

Jeanne,

Attached is an Applicant Initiated Interview Request Form to confirm our meeting on January 06, 2005 at 10:30 am to discuss proposed draft amendments to the claims sent on November 14, 2005.

Phyllis

PTOL-413A (09-04)
Approved for use through 07/31/2006. OMB 0651-0031
U.S. Patent and Trademark Office: U.S. DEPARTMENT OF COMMERCE

Applicant Initiated Interview Request Form

Application No.: 10/643,063 First Named Applicant: Wing-Kit Choi
Examiner: Jeanne DiGrazio Art Unit: 2871 Status of Application: Final

Tentative Participants:
(1) Jeanne DiGrazi (2) Phyllis K. Wood
(3)_____ (4)_____

Proposed Date of Interview: Jan. 06, 2006 **Proposed Time:** 10:30 (AM/PM)

Type of Interview Requested:
(1) [X] Telephonic (2) [ ] Personal (3) [ ] Video Conference

Exhibit To Be Shown or Demonstrated: [ ] YES [X] NO
If yes, provide brief description:_____

Issues To Be Discussed

Issues (Rej., Obj., etc)	Claims/ Fig. #s	Prior Art	Discussed	Agreed	Not Agreed
(1) Rej	1,11-15	6,469,765	[ ]	[ ]	[ ]
(2) New	17, 19	same	[ ]	[ ]	[ ]
(3)_____	_____	_____	[ ]	[ ]	[ ]
(4)_____	_____	_____	[ ]	[ ]	[ ]

[ ] Continuation Sheet Attached

Brief Description of Arguments to be Presented:
Prior art Figs 4 and 10, in combination, do not teach a LCD with continuous pixel electrode as claimed in amended claims or with discontinuous pixel & bottom electrode in same plane as claimed in new proposed claim 19.

An interview was conducted on the above-identified application on _____.

NOTE: This form should be completed by applicant and submitted to the examiner in advance of the interview (see MPEP § 713.01).

This application will not be delayed from issue because of applicant's failure to submit a written record of this interview. Therefore, applicant is advised to file a statement of the substance of this interview (37 CFR 1.133(b)) as soon as possible.

_____ _____
Applicant/Applicant's Representative Signature Examiner/SPE Signature

_____
Typed/Printed Name of Applicant or Representative

_____
Registration Number, if applicable

	Pixel electrode V3	Bottom common V2	Top common V1
Figure 2 Claims 1, 3, 7 and 12	Continuous 0v	Discontinuous 0v	Continuous +5v
Fig. 3 Claims 1, 3, 7, and 12	Continuous 0v	Discontinuous 0v	Continuous +5v
Fig. 4 Claims 1, 3, 7, and 11	Continuous +5v	Discontinuous 0v	Continuous +5v
Fig. 5 Claims 1, 3, 8	Continuous +5v	Discontinuous +5v	Continuous 0v
Fig. 7 New claim 19	Discontinuous +5v Pixel and bottom electrode in same plane	Discontinuous 0v	Continuous +5v
Fig. 9 Claims 1, 3, 7, and 11	Continuous +5v	Discontinuous 0v	Continuous +5v

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APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.	CONFIRMATION NO.
10/643,063	08/18/2003	Wing-Kit Choi	UCF-372	4155

7590 11/01/2005

Brians S. Steinberger
101 Brevard Avenue
Cocoa, FL 32922

EXAMINER	
DI GRAZIO, JEANNE A	

ART UNIT	PAPER NUMBER
2871	

DATE MAILED: 11/01/2005

Please find below and/or attached an Office communication concerning this application or proceeding.

Office Action Summary

Application No.	Applicant(s)	
10/643,063	CHOI ET AL.	
Examiner	**Art Unit**	
Jeanne A. Di Grazio	2871	

-- *The MAILING DATE of this communication appears on the cover sheet with the correspondence address* --

Period for Reply

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) OR THIRTY (30) DAYS, WHICHEVER IS LONGER, FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed, after SIX (6) MONTHS from the mailing date of this communication.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133). Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

Status

1)☒ Responsive to communication(s) filed on *07 August 2005*.

2a)☒ This action is **FINAL**. 2b)☐ This action is non-final.

3)☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

Disposition of Claims

4)☒ Claim(s) *1-3,5,7,8 and 10-18* is/are pending in the application.

4a) Of the above claim(s) _____ is/are withdrawn from consideration.

5)☐ Claim(s) _____ is/are allowed.

6)☒ Claim(s) *1-3,5,7,8 and 10-18* is/are rejected.

7)☐ Claim(s) _____ is/are objected to.

8)☐ Claim(s) _____ are subject to restriction and/or election requirement.

Application Papers

9)☐ The specification is objected to by the Examiner.

10)☐ The drawing(s) filed on _____ is/are: a)☐ accepted or b)☐ objected to by the Examiner.

Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).

Replacement drawing sheet(s) including the correction is required if the drawing(s) is objected to. See 37 CFR 1.121(d).

11)☐ The oath or declaration is objected to by the Examiner. Note the attached Office Action or form PTO-152.

Priority under 35 U.S.C. § 119

12)☐ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).

a)☐ All b)☐ Some * c)☐ None of:

1.☐ Certified copies of the priority documents have been received.

2.☐ Certified copies of the priority documents have been received in Application No. _____.

3.☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).

* See the attached detailed Office action for a list of the certified copies not received.

Attachment(s)

1) ☐ Notice of References Cited (PTO-892)
2) ☐ Notice of Draftsperson's Patent Drawing Review (PTO-948)
3) ☒ Information Disclosure Statement(s) (PTO-1449 or PTO/SB/08) Paper No(s)/Mail Date 10/2006
4) ☐ Interview Summary (PTO-413) Paper No(s)/Mail Date. _____.
5) ☐ Notice of Informal Patent Application (PTO-152)
6) ☐ Other: _____.

DETAILED ACTION

Claims

Claims 1-3, 5, 7-8 and 10-18 are pending per Amendment of August 4, 2005 with claims 4, 6 and 9 cancelled per said Amendment. Claims 1-3, 7-8 and 10-18 have all been amended.

Priority

Priority to Provisional Application 60405999 (Aug. 26, 2002) is claimed.

Claim Rejections - 35 USC § 103

The following is a quotation of 35 U.S.C. 103(a) which forms the basis for all obviousness rejections set forth in this Office action:

> (a) A patent may not be obtained though the invention is not identically disclosed or described as set forth in section 102 of this title, if the differences between the subject matter sought to be patented and the prior art are such that the subject matter as a whole would have been obvious at the time the invention was made to a person having ordinary skill in the art to which said subject matter pertains. Patentability shall not be negatived by the manner in which the invention was made.

This application currently names joint inventors. In considering patentability of the claims under 35 U.S.C. 103(a), the examiner presumes that the subject matter of the various claims was commonly owned at the time any inventions covered therein were made absent any evidence to the contrary. Applicant is advised of the obligation under 37 CFR 1.56 to point out the inventor and invention dates of each claim that was not commonly owned at the time a later invention was made in order for the examiner to consider the applicability of 35 U.S.C. 103(c) and potential 35 U.S.C. 102(e), (f) or (g) prior art under 35 U.S.C. 103(a).

Claims 1, 2, 3, 5 and 11-12 rejected under 35 U.S.C. 103(a) as being unpatentable over United States Patent 6,469,765 B1 (to Matsuyama et al.)(filed: June 13, 2000).

As to claim 1 (amended), Matsuyama has with regard to Figure 4, a first substrate with a first common electrode layer (color filter substrate 900 and common electrode 500), a second substrate (800) with both a pixel electrode (300(306)) layer and a second common electrode layer (400), and potential voltages applied to respective electrodes such that a voltage difference is produced between the pixel electrode branch portions and first common electrode and between the first common electrode and the second common electrode (Column 17, Lines 17-21)(Applicant's "means for generating an electric field between the first common electrode layer in the first substrate and both the pixel electrode layer and the second common electrode layer in the second substrate so that the display provides fast responses to high input data rates and allows for wide viewing angles for viewers."). Please see the electric field lines as shown in Figure 4.

Matsuyama, in the Figure 4 embodiment, does not appear to explicitly specify that the second common electrode is *discontinuous*.

However, in Figure 10, another embodiment, Matsuyama clearly shows a discontinuous common electrode 410 (414) for reduced overlapped area between pixel electrode and common electrode such that capacitance between these electrodes is reduced. Thus, display is enhanced. (See Column 22, Lines 5-40).

It would have been obvious to one of ordinary skill in the art of liquid crystals at the time the invention was made to modify embodiments of Matsuyama for reduced overlapped area, decreased capacitance and improved display quality.

Thus, claim 1 is rejected.

As to claim 2, an insulating film separates the pixel electrode (300) and first common electrode (400)(Column 17, Lines 46-49)(short arrows in Figure 4).

Thus, claim 2 is rejected.

As to claims 3 and 5, as noted, potential differences are applied to the various electrodes.

Thus, claims 3 and 5 are rejected.

As to claims 11 and 12, Matsuyama teaches and discloses vertical and non-vertical electric fields (Columns 17 and 18).

Thus, claims 11 and 12 are rejected.

Claims 10 and 13-18 are rejected under 35 U.S.C. 103(a) as being unpatentable over United States Patent 6,469,765 B1 (to Matsuyama et al.)(filed: June 13, 2000) in view of United States Patent 6,819,384 B2 (to Nakanishi et al.).

As to claim 10, Matsuyama does not appear to explicitly specify a dielectric layer adjacent a common electrode layer.

Nakanishi teaches and discloses a liquid crystal display panel capable of reducing persistence degree and a development method (Title, entire patent).

Figure 32 illustrates a dielectric layer (13) adjacent a flat electrode (12) to reinforce the lateral component of the electric field in the liquid crystal so that the liquid crystal can be driven with a lower applied voltage (Column 1, Lines 59-66).

Nakanishi is evidence that ordinary workers in the field of liquid crystals would have found the reason, suggestion and motivation to include a dielectric layer adjacent a common

electrode layer to reinforce the lateral component of the electric field in the liquid crystal so that the liquid crystal can be driven with a lower applied voltage (Column 1, Lines 59-66).

Therefore, it would have been obvious to one of ordinary skill in the art of liquid crystals at the time the invention was made to modify Matsuyama in view of Nakanishi to reinforce the lateral component of the electric field in the liquid crystal so that the liquid crystal can be driven with a lower applied voltage (Column 1, Lines 59-66).

Thus, claim 10 is rejected.

As to claims 13 (amended)-18, the method of providing a fast response and wide viewing angle to thin film transistor liquid crystal displays would have been obvious in view of the devices as taught and disclosed by Matsuyama in view of Kakanishi.

Thus, claims 13-18 are rejected.

Response to Arguments

Applicant's arguments with respect to said claims have been considered but are moot in view of the new ground(s) of rejection.

Conclusion

Any inquiry concerning this communication or earlier communications from the examiner should be directed to Jeanne A. Di Grazio whose telephone number is (571)272-2289. The examiner can normally be reached on M-F.

If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, Robert Kim, can be reached on (571)272-2293. The fax phone number for the organization where this application or proceeding is assigned is 703-872-9306.

Information regarding the status of an application may be obtained from the Patent Application Information Retrieval (PAIR) system. Status information for published applications may be obtained from either Private PAIR or Public PAIR. Status information for unpublished applications is available through Private PAIR only. For more information about the PAIR system, see http://pair-direct.uspto.gov. Should you have questions on access to the Private PAIR system, contact the Electronic Business Center (EBC) at 866-217-9197 (toll-free).

Jeanne Andrea Di Grazio
Patent Examiner
Art Unit 2871

JDG

ANDREW SCHECHTER
PRIMARY EXAMINER

SUPPLEMENTAL FORM PTO-1449 ATTORNEY DOCKET NO. UCF-372

US DEPARTMENT OF COMMERCE
PATENT AND TRADEMARK OFFICE

APPLICANT: CHOI, et al.
FOR: HIGH SPEED AND WIDE VIEWING ANGLE LIQUID CRYSTAL DISPLAYS
ATTORNEY DOCKET NO.: **UCF-372**

LIST OF ART CITED BY APPLICANT

U.S. PATENT DOCUMENTS

EXAMINER	DOCUMENT NO.	DATE	NAME	CLASS	SUBCLASS
JDG AA	5,978,059	11/02/1999	OHTA, ET AL.	349	141
JDG AB	6,111,627	08/29/2000	KIM, ET AL.	349	141
JDG AE	2002/0089632	07/11/2002	WONG	349	143

FOREIGN PATENT DOCUMENTS

NONE

OTHER ART (Including Author, Title, Date, Pertinent Pages, Etc.)

NONE

Jeanne Dingus 10/24/05